

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please ADD new claims 23 and 24 in accordance with the following:

1. (original) A pattern retrieving method for use with a pattern retrieval apparatus connected to a plurality of terminal devices through a network, comprising:
 - receiving a retrieval condition, transmitted from each of the plurality of terminal devices together with terminal device information for designation of each of the terminal devices, including a retrieval pattern and a retrieval expression for retrieval of data to be searched;
 - storing the received retrieval condition and the terminal device information in a retrieval condition buffer;
 - determining whether or not a preceding retrieving process is being performed;
 - when it is determined that the preceding retrieving process is not being performed, generating a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other if there are two or more identical retrieval patterns in the retrieval patterns stored in the retrieval condition buffer, excluding retrieval patterns other than one retrieval pattern;
 - generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first variable and a second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in the retrieval condition buffer unit, and the generated retrieval pattern variable table;
 - extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching the retrieval target database storing the data to be searched according to the generated retrieval request expression variable table; and
 - transmitting the extracted retrieval result to each of the plurality of terminal devices.

2. (original) The method according to claim 1, wherein
said retrieval condition buffer stores the retrieval condition until it is determined
that a retrieving process is completed.
3. (original) The method according to claim 1, wherein
said retrieval condition buffer stores the retrieval condition until a predetermined
time is reached or a predetermined capacity is filled.
4. (original) The method according to claim 1, wherein
said retrieval simultaneously retrieves a plurality of retrieval patterns.
5. (original) The method according to claim 1, wherein
said retrieval is performed in one of an Aho-Corasick (AC) method, an Expanded-
Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.
6. (original) A pattern retrieval apparatus connected to a plurality of terminal
devices through a network, comprising:
 - a retrieval target data storage unit storing data to be searched;
 - a retrieval condition reception unit receiving a retrieval condition, transmitted from
each of the plurality of terminal devices together with the terminal device information for
designation of each of the terminal devices, including a retrieval pattern and a retrieval
expression for retrieval of the data to be searched;
 - a retrieval condition buffer unit storing the retrieval condition and the terminal
device information received by said retrieval condition reception unit;
 - a retrieving process determination unit determining whether or not a preceding
retrieving process is being performed;
 - a retrieval pattern variable table generation unit generating, when the retrieving
process determination unit determines that the preceding retrieving process is not being
performed, a retrieval pattern variable table in which a retrieval pattern and a first variable having
the retrieval pattern as a value are associated with each other, if there are two or more identical
retrieval patterns in the retrieval patterns stored in said retrieval condition buffer units, excluding
the retrieval patterns other than one retrieval pattern;
 - a retrieval request expression variable table generation unit generating a retrieval
request expression variable table in which the retrieval request expression indicating the

retrieval pattern using the first variable and the second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in said retrieval condition buffer unit, and the retrieval pattern variable table generated by said retrieval pattern variable table generation unit;

a retrieval unit extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching said retrieval target data storage unit according to the retrieval request expression variable table generated by said retrieval request expression variable table generation unit; and

a transmission unit transmitting the retrieval result extracted by said retrieval unit to each of the plurality of terminal devices.

7. (original) The apparatus according to claim 6, wherein
said retrieval condition buffer unit stores the retrieval condition until said retrieving process determination unit determines that a retrieving process is completed.

8. (original) The apparatus according to claim 6, wherein
said retrieval condition buffer stores the retrieval condition until a predetermined time is reached or a predetermined capacity is filled.

9. (original) The apparatus according to claim 6, wherein
said retrieval unit simultaneously retrieves a plurality of retrieval patterns.

10. (original) The apparatus according to claim 6, wherein
said retrieval unit is one of an Aho-Corasick (AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.

11. (original) A computer-readable storage medium storing a program code of a pattern retrieval program executed by a pattern retrieval apparatus connected to a plurality of terminal devices through a network, said program comprising:

receiving a retrieval condition, transmitted from each of the plurality of terminal devices together with terminal device information for designation of each of the terminal devices,

including a retrieval pattern and a retrieval expression for retrieval of data to be searched;

storing the received retrieval condition and the terminal device information in a retrieval condition buffer;

determining whether or not a preceding retrieving process is being performed;

when it is determined that the preceding retrieving process is not being performed, generating a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other if there are two or more identical retrieval patterns in the retrieval patterns stored in the retrieval condition buffer, excluding retrieval patterns other than one retrieval pattern;

generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first variable and a second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in the retrieval condition buffer unit, and the generated retrieval pattern variable table;

extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching the retrieval target database storing the data to be searched according to the generated retrieval request expression variable table; and

transmitting the extracted retrieval result to each of the plurality of terminal devices.

12. (original) The storage medium according to claim 11, wherein said retrieval condition buffer stores the retrieval condition until it is determined that a retrieving process is completed.

13. (original) The storage medium according to claim 11, wherein said retrieval condition buffer stores the retrieval condition until a predetermined time is reached or a predetermined capacity is filled.

14. (original) The storage medium according to claim 11, wherein said retrieval simultaneously retrieves a plurality of retrieval patterns.

15. (original) The storage medium according to claim 11, wherein

said retrieval is performed in one of an Aho-Corasick (AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.

16. (original) A pattern retrieval system in which a plurality of terminal devices and a pattern retrieval apparatus are connected through a network, wherein:

each of said plurality of terminal devices comprises:

a terminal device side transmission unit transmitting a retrieval condition containing a retrieval pattern for retrieval of data to be searched and a retrieval pattern together with terminal device information for designating each terminal device;

said pattern retrieval system comprises:

a retrieval target data storage unit storing data to be searched;

a retrieval condition reception unit receiving a retrieval condition, transmitted from each terminal device side transmission unit of said plurality of terminal devices together with the terminal device information for designation of each of the terminal devices, including a retrieval pattern and a retrieval expression for retrieval of the data to be searched;

a retrieval condition buffer unit storing the retrieval condition and the terminal device information received by said retrieval condition reception unit;

a retrieving process determination unit determining whether or not a preceding retrieving process is being performed;

a retrieval pattern variable table generation unit generating, when the retrieving process determination unit determines that the preceding retrieving process is not being performed, a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other, if there are two or more identical retrieval patterns in the retrieval patterns stored in said retrieval condition buffer units, excluding the retrieval patterns other than one retrieval pattern;

a retrieval request expression variable table generation unit generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first variable and the second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in said retrieval condition buffer unit, and the retrieval pattern variable table generated by said retrieval pattern variable table generation unit;

a retrieval unit extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching said retrieval target data storage unit according to the retrieval request expression variable table generated by said retrieval request expression variable table generation unit; and

a transmission unit transmitting the retrieval result extracted by said retrieval unit to each of the plurality of terminal devices; and

each of said plurality of terminal devices further comprises

a terminal device side reception unit receiving the result transmitted by said transmission unit.

17. A pattern retrieval program executed by a pattern retrieval apparatus connected to a plurality of terminal devices through a network, comprising:

receiving a retrieval condition, transmitted from each of the plurality of terminal devices together with terminal device information for designation of each of the terminal devices, including a retrieval pattern and a retrieval expression for retrieval of data to be searched;

storing the received retrieval condition and the terminal device information in a retrieval condition buffer;

determining whether or not a preceding retrieving process is being performed;

when it is determined that the preceding retrieving process is not being performed, generating a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other if there are two or more identical retrieval patterns in the retrieval patterns stored in the retrieval condition buffer, excluding retrieval patterns other than one retrieval pattern;

generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first variable and a second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in the retrieval condition buffer unit, and the generated retrieval pattern variable table;

extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching the retrieval target database storing the data to be searched according to the generated retrieval request expression variable table; and

transmitting the extracted retrieval result to each of the plurality of terminal

devices.

18. (original) The pattern retrieval program according to claim 17, wherein said retrieval condition buffer stores the retrieval condition until it is determined that a retrieving process is completed.
19. (original) The pattern retrieval program according to claim 17, wherein said retrieval condition buffer stores the retrieval condition until a predetermined time is reached or a predetermined capacity is filled.
20. (original) The pattern retrieval program according to claim 17, wherein said retrieval simultaneously retrieves a plurality of retrieval patterns.
21. (original) The pattern retrieval program according to claim 17, wherein said retrieval is performed in one of an Aho-Corasick (AC) method, an Expanded-Boyer-Moore (EBM) method, and a Shinohara-Arikawa (SA) method.
22. (original) A pattern retrieval apparatus connected to a plurality of terminal devices through a network, comprising:
 - retrieval target data storage means for storing data to be searched;
 - retrieval condition reception means for receiving a retrieval condition, transmitted from each of the plurality of terminal devices together with the terminal device information for designation of each of the terminal devices, including a retrieval pattern and a retrieval expression for retrieval of the data to be searched;
 - retrieval condition buffer means for storing the retrieval condition and the terminal device information received by said retrieval condition reception means;
 - retrieving process determination means for determining whether or not a preceding retrieving process is being performed;
 - retrieval pattern variable table generation means for generating, when said retrieving process determination means determines that the preceding retrieving process is not being performed, a retrieval pattern variable table in which a retrieval pattern and a first variable having the retrieval pattern as a value are associated with each other, if there are two or more identical retrieval patterns in the retrieval patterns stored in said retrieval condition buffer means, excluding the retrieval patterns other than one retrieval pattern;

retrieval request expression variable table generation means for generating a retrieval request expression variable table in which the retrieval request expression indicating the retrieval pattern using the first variable and the second variable having the retrieval request expression as a value are associated, and the retrieval request expression indicating the terminal device information and the retrieval expression using the second variable and the second variable having the retrieval request expression as a value are associated based on the retrieval expression and the terminal device information stored in said retrieval condition buffer means, and the retrieval pattern variable table generated by said retrieval pattern variable table generation means;

retrieval means for extracting a retrieval result matching the retrieval condition transmitted from each of the plurality of terminal devices by searching said retrieval target data storage means according to the retrieval request expression variable table generated by said retrieval request expression variable table generation means; and

transmission means for transmitting the retrieval result extracted by said retrieval means to each of the plurality of terminal devices.

23. (new) A character string text search method, comprising:
receiving plural character string text search requests including corresponding search variables;
combining the requests into a combined retrieval pattern including the search variables of the requests; and
performing a search using the combined retrieval pattern.

24. (new) A character string text search method, comprising:
receiving plural character string text search requests including corresponding search variables;
storing the variables in a correspondence table with corresponding search request identifiers;
combining the requests into a combined retrieval pattern including the search variables of the requests;
performing a search using the combined retrieval pattern; and
providing search results for the search requests responsive to the contents of the table.